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ABSTRACT

Personal, job-related, and environmental factors that might account for academic mid-level administrators' general job satisfaction were studied with a sample of 260 administrators at a large research university. Attention was directed to: personal characteristics (sex, age, number of years employed at the university), perceived job characteristics (autonomy, skill variety, task significance, feedback from the job itself, and opportunities to deal with others); perceived environment characteristics (perceptions of the degree to which the university's environment is cooperative, fair, caring, and characterized by the involvement of professional staff in decision making); and salary level. Based on multiple regression analyses, findings included: age and sex were significant predictors, with older administrators and female administrators more satisfied than younger or male administrators; three job characteristics were significantly associated with job satisfaction (autonomy, skill variety and amount of feedback from the job itself); perceiving the environment as fair was the only environmental characteristic not significantly associated with satisfaction, while perceiving a caring atmosphere at the institution was the most significant environmental predictor. (SW)

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Paper presented at the Annual Meeting
of the
Association for the Study of Higher Education

Chicago, Illinois
March, 1985

Ann E. Austin

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This paper was presented at the Annual Meeting of the Association for the Study of Higher Education held at the Palmer House Hotel in Chicago, Illinois, March 15-17, 1985. This paper was reviewed by ASHE and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC collection of ASHE Conference papers.

ABSTRACT

Factors Contributing to Job Satisfaction
of University Mid-Level Administrators

Based on theories linking job characteristics and environmental characteristics to job satsifaction, this paper reports the results of a study of factors associated with the job satisfaction of mid-level administrators in higher education. The results are based on survey data collected from 260 administrators at a large research university. Multiple regression analyses indicated that several job characteristics (especially autonomy) and several environmental characteristics (especially the degree to which the institution is perceived as having a "caring" atmosphere) explain significant percentages of variance in job satisfaction. Implications of the results are discussed.

While much research attention focuses on the career development, morale, and job satisfaction of faculty members and senior administrators in higher education, less is known about aspects of the work experience of mid-level administrators in academe. These administrators do not have their primary appointments as faculty members but rather hold administrative posts in such offices as admissions, financial aid, physical plant, counseling, and institutional development. Typically, they report to the top-level officers and often supervise assistants and first-line administrators.

Several themes often appear in the literature concerning these mid-level administrators in higher education. First, they are ackowledged to be crucial to the successful operation of colleges and universities, since they conduct many of the transactions and provide many of the services which support learning and research activities. A second theme in the literature focuses on the challenges and limitations facing mid-level administrators. As "linking pins" in organizations, they face conflicting demands from faculty members, administrators, and students. The literature suggests that they often are barred from participation in the determination of institutional goals and missions, limited in opportunities for upward mobility, bestowed with minimal rewards, and accorded less than full respect from faculty members (Kanter, 1979; Scott, 1978). Using a rather graphic comparison, a recent article suggests that the middle manager's work experience in academe might be likened to "a dog's life," where the possibilities for progress, change, and full respect are remote (Kraus, 1983, p. 29).

These conditions could cause mid-level administrators to be a disaffected, dissatisfied, frustrated constituency within higher education. While the relationship between satisfaction and productivity is not yet entirely clear, such attitudes and related behaviors seem likely to lessen the productivity and quality of work of these academic administrators.

Furthermore, lower levels of satisfaction among an important group within a university community might negatively affect the climate or culture of the organization. In contrast to expected dissatisfaction from reported frustrations, however, the empirical research on middle administrators in higher education indicates that they feel generally high satisisfaction with their work. In fact, findings of high satisfaction are reported in studies conducted in each of the three most recent decades (Bess and Lodahl, 1969; Solmon and Tierney, 1977; Scott, 1978; Austin, 1984).

The Bess and Lodahl study (1969) included a sample of administrators in Big Ten and Ivy League institutions holding posts in admissions, financial aid, student personnel, the registrar's office, institutional research, and university relations. Among other questions, the study examined their overall satisfaction with their work; fifty percent of the 69 respondents indicated they were "very satisfied" and another 45 percent described themselves as "fairly satisfied". When specific aspects of satisfaction were examined, the respondents reported greatest satisfaction with the institution and with their relations with their peers and supervisors, and least satisfaction with salary levels. Results showed that "less than half the sample reported being very satisfied with opportunities for personal growth, autonomy, learning, and exercising special abilities." The authors suggested that while social needs appeared to be satisfied, "subsistence and growth needs are being frustrated" (p. 227).

The Solmon and Tierney study (1977) of approximately 200 administrators (including presidents, vice presidents, deans, and directors of admission, financial aid, and the registrar's office) at 22 private liberal arts colleges similarly showed respondents to be satisfied with many aspects of their work. In addition, the researchers concluded that aspects of job satisfaction were significantly enhanced by "the behaviors [the administrators] value in

subordinates, perceptions of attributes by which the institution rewards administrators, and congruency between these perceptions and the behaviors valued by individual administrators" (p. 429). The mid-level administrators studied in Scott's research (1978) also indicated high satisfaction; Scott summarized that "most satisfaction was found in opportunities to help students and staff, and with the opportunity to act independently and to make an impact on one's organization" (p. 26).

This study continues the work begun by Bess and Lodahl (1969), Solmon and Tierney (1977), and Scott (1978). Using multiple regressions, it attempts to develop a model that identifies the relative weight of several variable sets in contributing to general job satisfaction of academic mid-level administrators. The variable sets and analyses are based on conceptual frameworks concerning job design and job satisfaction that have gained increasing attention since the three studies reviewed were conducted.

The issue of administrators' satisfaction with their work continues to be important for several reasons. First, since mid-level administrators are critical to the daily operations of a university or college, the way in which they perceive and experience their work may have implications for the institution. Second, given present conditions of fiscal constraint in academe, some administrative personnel may find that options to pursue professional growth through mobility are reduced. Under such conditions, institutions may wish to consider ways to enhance the satisfaction of staff members who have little choice but a long tenure with one organization. Finally, articles such as Kraus's (1983) continue to emphasize frustrations and problems in the work experience of academic mid-level administrators, even as research studies point to high levels of satisfaction. This paper contributes to a better understanding of that seeming contradiction.

Theoretical Framework

This study is based on conceptual frameworks that posit certain job characteristics and certain environmental characteristics to enhance such outcomes as job satisfaction, organizational commitment, and quality and productivity of performance. Hackman and Oldham (1980) and Super and Hall (1978) have emphasized the importance of key job characteristics in affecting work experience. Hackman and Oldham (1980) posit a model of job design in which various job characteristics contribute to certain psychological states associated with such outcomes as high general job satisfaction, high internal work motivation, and high work effectiveness. The core job characteristics in their model are skill variety, task identity, task significance, autonomy, and feedback from the job. The opportunity to deal with others through one's work is an important characteristic also. Similarly, Super and Hall (1978) posit career satisfaction to be influenced positively by autonomy in conducting one's responsibilities, a sense of challenge in the work, and appropriate and sufficient rewards.

Other researchers and theorists are emphasizing the beneficial results associated with environments characterized by participation, openness, and collaboration (Kanter, 1983; Ouchi, 1981; Powers and Powers, 1983). Organizations that promote a sense of fairness, a sense of caring and support among employees, and staff involvement in decision-making find they generate many good ideas and often better decisions. Furthermore, open, caring, participative environments respond to individuals' needs for psychological growth, autonomy, and personal achievement. Greater individual satisfaction as well as increased productivity are likely results.

Given these theories, one might expect the satisfaction of mid-level administrators in academe to be related to their perceptions of characteristics of their jobs as well as their perceptions of environmental

characteristics. More specifically, such job characteristics as autonomy, skill variety, task significance, opportunities to deal with others, and feedback provided from doing the job would be expected to relate positively to general job satisfaction and to account for a substantial portion of the variance in individuals' job satisfaction over and above the variance accounted for by differences in individuals on personal dimensions. Environmental characteristics such as the degree to which administrators perceive the environment to be fair, caring, cooperative, and one in which professional staff are involved in decision-making also would be expected to relate positively to job satisfaction and to account significantly for variance in job satisfaction scores. Since the extrinsic reward of salary is often used as a motivator, it might account for some differences in satisfaction of administrators. However, Herzberg's (1973) theory, though debated, suggests that an extrinsic reward such as salary may have more relationship to dissatisfaction than it does to satisfaction. Furthermore, one might expect the general job satisfaction of mid-level administrators in academe (as compared to comparable administrators in other sectors) to be more related to their perceptions of characteristics of their jobs and of the work environment than to salary; after all, they have chosen to take positions in an organizational sector whose culture typically emphasizes service rather than profit.

Building on these frameworks, this study examines several sets of variables as possible correlates of academic mid-level administrators' general job satisfaction: 1) Personal Charateristics (included in this study are sex, age, and number of years employed at the university); 2) Perceived Job Characteristics (included in this study are skill variety, task significance, autonomy, feedback from the job itself, and opportunities to deal with others); 3) Perceived Environmental Characteristics (included in this study

are administrators' perceptions of the degree to which the university's environment is cooperative, fair, caring, and characterized by the involvement of professional staff in decision-making); and 4) one Extrinsic Characteristic (salary level).

While the literature offers various perspectives on job satisfaction, this study uses Hackman and Oldham's (1980) definition of general job satisfaction as "an overall measure of the degree to which the employee is satisfied and happy in his or her work." Thus, it is viewed in this study as an attitude that continues over time, is identifiable by a respondent, and is measurable on a set of Likert-scale items.

The study is designed to analyze correlates of job satisfaction of mid-level administrators in academe. More specifically, the study addresses several related quesitons: 1) Taking each variable set alone, how much variability in job satisfaction is accounted for by the personal variables, by the job characteristics, by the environmental characteristics, and by the extrinsic characteristic of salary? 2) Within each of the three variable sets, what specific factors are associated significantly with general job satisfaction? 3) When the variable sets are taken together, how much variability in job satisfaction is explained by the variable sets included in the study's conceptual model?

Method

Sample

Data for this study were collected as part of a survey concerning aspects of university mid-level administrators' work experience conducted during late winter, 1982 and early spring, 1983. The sample for the study included 424 individuals at a large, public research university who met the definition of mid-level administrator as one who reports to the top-level officers of a

university or college or to other middle administrators, often supervises assistants, but does not hold a primary appointment as a faculty member. Rather, such an individual would hold an administrative post in an office such as admissions, financial aid, physical plant, or institutional development. A 62 percent response rate (N=260) was obtained to the survey.

Measures

Data on several sets of variables were collected through the survey and used in this study. Details pertaining to the measurement of variables in each variable set are described below. Table 1 shows intercorrelations between all variables included in this study.

[Insert Table 1 approximately here.]

Demographic Data

The demographic data used in the study included sex, age, and number of years employed at the university where the study was conducted.

Job Characteristics

The job characteristic variables, developed and tested by Hackman and Oldham (1980) as part of their Job Diagnostic Survey, included respondents' perceptions of the degree to which their positions involve skill variety, task significance, autonomy, feedback from the job itself, and opportunities to deal with others. Except for feedback from the job itself, the variables were constructed from two or three survey items each. Feedback from the job was measured by one item only. Each job characteristic variable was measured on a one to seven Likert-like scale (1 = low, 7 = high). Definitions of each variable are provided below:

a) Skill Variety: "The degree to which the job requires a variety of different activities in carrying out the work, involving the use of a number of different skills and talents of the person" (Hackman and Oldham, 1980, p. 78).

b) Task Significance: "The degree to which the job has substantial impact on the lives of other people, whether those people are in the immediate organization or in the world at large" (Hackman and Oldham, 1980, p. 79).

c) Autonomy: "The degree to which the job provides substantial freedom, independence, and discretion to the individual scheduling the work and in determining the procedures to be used in carrying it out" (Hackman and Oldham, 1980, p. 80).

d) Feedback from the Job Itself: "The degree to which carrying out the work activities required by the job provides the individual with direct and clear information about the effectiveness of his or her performance" (Hackman and Oldham, 1980, p. 80).

e) Opportunities to Deal With Others: "The degree to which the job requires employees to work closely with other people in carrying out the work activities (including dealings with other organization members and with external organizational 'clients')" (Hackman and Oldham, 1980, p. 104).

Environmental Characteristics

The environmental variables were developed, tested, and revised specifically for the survey instrument by the researcher. These variables also were measured on one to seven Likert-like scales (1 = low, 7 = high) and measured respondents' perceptions of the degree to which the environment reflects particular characteristics. Perceptions of the following characteristics were investigated:

a) Caring Environment: The degree to which the environment is characterized by a sense of personal concern and support among and between those working in it.

b) Cooperative Workplace: The degree to which the environment is characterized by a sense of cooperation and helpfulness among and between those working in it.

c) Fair Environment: The degree to which the environment is characterized as one in which policies, decisions, and interactions are governed by a sense of fairness.

d) Professional Staff Involved in Decision-Making: The degree to which professional staff are involved in decision-making at the institution.

Extrinsic Characteristic

Only one extrinsic characteristic of a respondent's work, salary, was included in this study. Information concerning salary was collected according to levels; while the first level included salaries under $15,000, levels beginning at $15,000 increased at $5,000 intervals (i.e., $15,000 to $19,999; $20,000 to $24,999).

General Job Satisfaction

The dependent variable, job satisfaction, is an index based on the mean of several items and developed and tested by Hackman and Oldham (1980). This variable was defined previously, and is measured by the mean of such questions as "Generally speaking, how satisfied are you with your job?", "How frequently do you think of quitting the job?" (reverse scored), and "How satisfied are you with the kind of functions and tasks you perform in your job?" (Hackman and Oldham, 1980). The job satisfaction variable also was measured on a seven-point Likert-like scale (1 = low, 7 = high).

Statistical Method

Multiple regression analyses were used to examine the relationships of administrators' personal charcteristics, perceptions of job characteristics and environmental characteristics, and the extrinsic characteristic of salary to job satisfaction. The analyses consisted of two parts. First, the relationship of each set of independent variables to the dependent variable of satisfaction was tested. Within each set, a stepwise entry process was used in order to determine the importance of each independent variable, followed by

forced entry of the remaining variables. Following the analyses of the relationship of each set of independent variables to satisfaction, another multiple regression utilizing a setwise entry process was conducted; in this regression, only variables which had been shown to be significant predictors in the previous analyses were included in each set entered. Missing data in the regression analyses were recoded with the group mean appropriate for the variable, a procedure which contributes to a conservative analysis.

Results

The respondents indicated that their general job satisfaction was rather high. On a one to seven scale, (1 = low, 7 = high), the mean satisfaction score was 5.49 (Standard Deviation, 1.12). The multiple regression analyses showed that, taken as individual sets, personal characteristics, perceived job characteristics, and perceived environmental characteristics all related significantly to administrators' job satisfaction, as did the extrinsic reward of salary.

[Insert Table 2 approximately here.]

Within the sets, the stepwise regressions indicated those specific variables significantly explaining variance in job satisfaction scores.

[Insert Table 3 and Table 4 approximately here.]

Personal Characteristics: When the personal variables were tested (see Tables 2 and 3), age entered the stepwise regression first, indicating that it was the strongest of the three predictors. Older administrators tended to be more satisfied. Sex also was significant as a predictor of satisfaction, with women somewhat more satisfied than men. Number of years of employment at the university did not enter as a significant predictor. Table 4 indicates that

the two significant personal variables together acccounted for seven percent of the variance in mid-level administrators' job satisfaction.

Job Characteristics: Administrators' perceptions of characteristics of their jobs also significantly predicted level of general job satisfaction (see Table 2). In the stepwise regression, autonomy entered first, accounting for 19 percent of the variation in job satisfaction, followed by skill variety on the second step, and feedback from the job itself on the third step. Neither perception of the extent to which the position involves interacting with others nor perception of the task significance of the job related significantly to the general job satisfaction of the mid-level administrators in the sample (see Table 3 and 4). The three job characteristics significantly associated with general satisfaction together accounted for 31 percent of the variance in the dependent variable (see Tables 2 and 4). More satisfied administrators rated their positions as being higher in autonomy, skill variety, and amount of feedback from the job itself than did less satisfied administrators.

Environmental Characteristics: Of the four environmental characteristics, only perception of the degree to which the environment is fair was not significantly associated with job satisfaction (see Table 3). The three significant environmental characteristics together explained 17 percent of the variation in administrators' job satisfaction (see Table 2). Administrators' perception of the degree to which their workplace has a caring environment entered the equation on the first step and accounted for 11 percent of the variation in job satisfaction scores. Perception of the degree to which the work environment can be characterized as cooperative entered on the second step of the multiple regression, adding 4 percent to the explained variance. Perception of the degree to which professional staff are involved in decision-making entered at the third step and explained an additional two percent of the

variance (see Table 4). More satisfied administrators rated the environment as more caring and cooperative and perceived professional staff to be more involved in decision-making than did less satisfied administrators.

Extrinsic Characteristic: The only extrinsic variable included in this study, level of salary, related significantly to administrators' job satisfaction ($P \leq .01$), but, taken alone, only accounted for three percent of the variance in the dependent variable (see Tables 2, 3, and 4). Compared to the amount of variance accounted for by the job characteristics or the environmental characteristics, salary was not as strong a predictor of job satisfaction for the mid-level administrators in the study.

Regression with Variable Sets: After the analyses of the relationship of each set of variables, taken individually, to job satisfaction, a setwise entry process was used (including only the significant variables in each set) to investigate the total variance in job satisfaction accounted for by the variable sets included in the conceptual model. The overall analysis after personal, job, and environmental variables were included in the model provided a multi-variate F of 22.32, significant at the .001 level (see Table 5) The three sets of variables together accounted for 40 percent of the variance in administrators' job satisfaction. After differences in satisfaction related to the personal characteristics of age and sex were accounted for (predicting 7 percent of the variance in the dependent variable), the job characteristics set explained 27 percent more of the variance. The environmental characteristics, after removing differences in satisfaction accounted for by personal characteristics and perceptions of job characteristics, added another 6 percent to the explanatory power of the model. After differences due to personal, job, and environmental characteristics were removed, salary was not significantly related to satisfaction and did not enhance the power of the

model to explain variance in the satisfaction score.

Discussion

This study confirms previous research in finding that general job satisfaction of the academic mid-level administrators studied is quite high. This study contributes to the literature by evaluating the relative importance of several variable sets as they relate to administrators' satisfaction. Each set of variables included in the conceptual model alone was related significantly to satisfaction, though the extrinsic characteristic of salary level explained no additional variance after the other three variable sets were in the equation. The job characteristics appear especially important in relation to satisfaction, followed by perceptions of environmental characteristics.

When personal characteristics were examined, it is not surprising that age was found positively and significantly associated with satisfaction. Other studies (Hall, Schneider, and Nygren, 1970; Mowday, Porter, and Steers, 1982) have shown such variables as satisfaction and organizational commitment to increase over time. As one gets older, one likely wishes to perceive one's situation in the best possible light. People want to believe that their life decisions have been good ones. Furthermore, as employees get older, they often receive higher salaries, more challenging responsibilities, and greater autonomy (Mowday, Porter, and Steers, 1982). Another interpretation of this finding might be that older people are more realistic and less idealistic in their expectations of their work than their younger colleagues. Consequently, they may experience more satisfaction under similar conditions.

The finding that the job characteristic set taken alone explained 31 percent of the variance in satisfaction scores suggests the merit in theories that point to job design as a key element associated with such outcomes as

satisfaction. Note should be taken that autonomy alone is the single greatest predictor among all variables included in the study. It accounts for almost one-fifth of the variability in the dependent variable. Administrators in this study perceived that they have considerable autonomy in their work (mean of 6.05 on a seven-point scale). Previous research on academic mid-level administrators also provided some findings concerning autonomy. In contrast to this study, Bess and Lodahl (1969) found autonomy to be among the least satisfying aspects of mid-level administrators' work. However, Scott (1978, p. 26) "found opportunities to act independently" an area of high satisfaction among the administrators he studied. Perhaps the degree of autonomy mid-level administrators enjoy in their own areas of responsibility has increased in the two decades between the Bess and Lodahl study and the research conducted by Scott and in this study. Furthermore, the present study did not focus on administrators' satisfaction specifically with the degree of their autonomy, but rather investigated the relationship between perceived autonomy and a general sense of job satisfaction. One might assume, however, that the high mean score on the extent to which they perceived their positions as providing autonomy suggests the administrators in this study were quite satisfied with this specifc aspect of their work.

Both written responses the respondents provided to open-ended questions on the survey and comments offered in a small number of interviews the researcher conducted with some of the respondents in the sample emphasized the importance of autonomy when the administrators evaluate their satisfaction with their work. For example, one mid-level administrator observed that the university offers greater autonomy to employees than would be available in business and other sectors. He explained that he thrives when he has the opportunity to set goals.

The finding that autonomy is such a critical job characteristic supports much previous theoretical and empirical research on the relationship between job characteristics and satisfaction and productivity. Kohn (1976), for example, has emphasized that control over one's work is a critical variable for employees' in many workplaces. Though correlation does not imply causation, those interested in enhancing the satisfaction of academic mid-level administrators might provide an atmosphere in which these professional staff can exercise maximum autonomy within their respective domains of responsibility.

Both skill variety, (the diversity of tasks required in the position) and the amount of feedback from the job itself also contributed significantly to variance explained in administrators' general job satisfaction beyond that explained by autonomy. In terms of skill variety, observation of the work of mid-level administrators in various areas of the university suggests that their daily tasks may be quite diverse by nature, even if a fairly regular cycle of activities occurs over a longer period. For example, an admissions director may face similar activities each year in getting a class in place for September, but the tasks each day are sure to be diverse and sometimes unexpected. The mean score (4.08) on skill variety indicates that the respondents in this study did perceive that they have moderately diverse activities in their work. They also rated feedback obtained from doing the job quite high (5.31). As with skill variety, this characteristic seems to be an inherent part of their work. By interacting with colleagues, superiors, and students and engaging in their daily work, mid-level administrators receive some sense of "how things are going." That both skill variety and job feedback, both of which are built into the work of mid-level administrators,

are related significantly to general job satisfaction suggests that the daily activity of doing the work itself is rather satisfying for these administrators.

Brief comment should be made concerning the relationship of dealing with others to general job satisfaction. While this variable was not significantly related to general job satisfaction in this study, Scott (1978, p. 26) reported that "opportunities to help students and staff" were aspects of great satisfaction for the administrators he studied. While the findings from these studies seem to be contradictory, they can be reconciled. In this study, the respondents were not asked how satisfied they were with this particular aspect of their work. Rather, the study examined a set of variables to determine the relative importance of each of them in predicting general job satisfaction. While the respondents may have been quite satisfied with their interactions with students and colleagues, these interactions accounted for no more variance in general satisfaction than that already more powerfully explained by the job characteristics of autonomy, skill variety, and feedback from doing the job.

The set of environmental characteristics, taken alone, explained 17 percent of the variance in general job satisfaction. In this set of variables, the perception of the degree to which the environment is characterized by a sense of caring and concern explained the greatest amount of variance in the dependent variable. While they perceived their particular environment to be only moderately caring (mean 3.19), this variable was significantly related to satisfaction. This is an environmental characteristic that could certainly be increased through the tone set by senior administrators. For example, one mid-level administrator interviewed explained that he feels great satisfaction when the president of the

university takes the time to send a note of appreciation or commendation for a project particularly well-executed.

That the degree to which the administrators perceived the environment to be characterized by cooperation was related significantly to job satisfaction is not surprising, given that one presumably can do one's work more easily in an environment in which individuals are helpful and cooperative with each other. However, it is surprising that perception of the degree to which professional staff are involved in decision-making explained only an additional two percent of the variance in job satisfaction, beyond the explanatory power of the two variables that entered on the first and second steps. Based on the literature pointing to the benefits of more participatory decision-making in organizations, one might have expected this variable to have entered at an earlier step and to have accounted for more variation in the job satisfaction scores. Perhaps mid-level administrators distinguish between autonomy in their own domain of work and participation in decisions at the level of institutional policy. The respondents indicated a fairly high degree of autonomy (mean score, 6.05) and the regression analyses showed autonomy alone to account for almost one-fifth of the variance in general job satisfaction. In contrast, they indicated a much lower perception of the degree to which professional staff are involved in decision-making (mean score, 3.36), and the regression analyses showed this variable to account for less variation in job satisfaction. Perhaps mid-level administrators derive satisfaction from their autonomy within their own domain of responsibility, without expecting a strong role in decision-making at the level of institutional policies.

The extrinsic variable, salary, related significantly to general job satisfaction when taken alone, but explained only 3 percent of the variance in the dependent variable. Furthermore, it added no explanatory power beyond

that accounted for by the other variable sets. Several interpretations of this finding are possible. The administrators may have chosen their positions because of their intrinsic characteristics and the nature of the environment in a university and may not base their satisfaction on their salary level. A second interpretation, based on Herzberg's work (1973), suggests that salary may not relate to satisfaction, but instead may play a role on a dissatisfaction scale. Other work by this researcher on work commitment suggested that salary and fringe benefits were not very important in contributing to commitment, but did weaken commitment if they were neglected too greatly or threatened (Austin, 1984). Salary may relate to satisfaction in a similar manner.

The setwise regression including all significant variables in each set indicates that the conceptual model, including personal, job, and environmental characteristics, explained 40 percent of the variance in job satisfaction. Since the job characteristics and the environmental characteristics explained 33 percent of the variance beyond the personal variables, they are clearly important sets of variables. As expected from the conceptual framework, the significant variables in each of these sets were related positively to general job satisfaction. While other variables not included in this study are required to explain the remaining variance, the results do support the literature that associates satisfaction (as well as other outcomes) with certain job characteristics and environmental characteristics.

Because the study was conducted at one university, its results have limitations. Nevertheless, several recommendations can be made based on this study and consistent with findings from other research on mid-level administrators as well as other employee groups. Since several job and

environmental characteristics explain substantial amounts of variance, senior administrators might encourage the development of those characteristics. First, while correlation does not imply causation, it seems likely that greater autonomy relates to increased levels of general satisfaction. The findings suggest that administrators need not be involved in all decisions, but within their own domains of responsibility, their autonomy is very important to them. Second, since an environment characterized by a sense of care and concern relates to satisfaction, senior administrators might strive to express recognition and appreciation for the work of mid-level administrators. Third, from this study, no assumption should be made that salary is not important to mid-level administrators. Though it does not appear to explain much additional variance in general satisfaction, other research suggests that it may be a factor in weakening satisfaction if neglected. While this study emphasizes the association of certain intrinsic job characteristics and environmental characteristics to satisfaction, salary levels should be treated with care.

While some of the findings in this study confirm previous research, this research contributes to the literature by examining the power of certain sets of job and environmental characteristics, chosen for inclusion in the study on the basis of current theories concerning job design and work environments, to explain significant portions of the variance in mid-level administrators' general job satisfaction. While attention is often drawn to the frustrations and limitations in the work experience of mid-level administrators, the results from this study show a high level of general job satisfaction among this group and suggest that a substantial portion of that satisfaction is related to the characteristics of the job itself and certain features of the environment. While frustrations should not be ignored, it is heartening that

much in the work itself is satisfying. Furthermore, the environmental characteristics related to satisfaction can be influenced by senior administrators and faculty. In circumstances where such frustrations as limited mobility options or restricted advancement possibilities cannot be changed, efforts to support and improve the job and environmental characteristics shown in this study to relate to general job satisfaction might be beneficial for mid-level administrators as individuals and for the quality of their work in the organization.

TABLE 1

Intercorrections Among All Variables
Included in Study

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Years Employed at University	1.00											
2. Age	.63	1.00										
3. Skill Variety	.05	.02	1.00									
4. Task Significance	.10	.16	.25	1.00								
5. Autonomy	.11	.04	.40	.24	1.00							
6. Feedback from Job	-.05	.17	.29	.26	.26	1.00						
7. Dealing with Others	-.12	-.12	.27	.28	.18	.16	1.00					
8. Caring Environment	.22	.30	.08	.11	.17	.05	-.10	1.00				
9. Cooperative Environment	.30	.25	.20	.18	.23	.20	-.11	.43	1.00			
10. Professional Staff Involved	.05	.12	.26	.13	.25	.24	.03	.45	.34	1.00		
11. Salary	.28	.34	.16	.20	.19	.06	.15	.27	.26	.25	1.00	
12. Job Satisfaction	.19	.24	.44	.26	.44	.36	.10	.34	.33	.32	.18	1.00

TABLE 2

Multiple Correlation Coefficient and Percent of Variance in Job Satisfaction Explained by Variables Sets With Only Significant Variables Included in Each Set

Variable Set	R	R^2	df	F
Personal Characteristics	.27	.07	2/257	10.33***
Job Characteristics	.56	.31	3/256	39.66***
Environmental Characteristics	.42	.17	3/256	18.70***
Extrinsic Reward	.18	.03	1/258	8.57**

* $P \leq .05$
** $P \leq .01$
*** $P \leq .001$

TABLE 3

Summary of Multiple Regression Analysis
of Each Variable Set on Job Satisfaction

Variable Set	Source of Variation	$\bar{X}$[a]	SD	F[b]	Beta
Personal Characteristics	Age	46.46	9.51	7.71**	.22
	Sex	1.26	.44	4.55*	.13
	Years Employed at University	14.46	8.33	.97	.08
Job Characteristics	Autonomy	6.05	.86	23.44***	.28
	Skill Variety	4.08	.66	19.96***	.26
	Feedback from Job	5.31	1.22	12.81***	.20
	Dealing with Others	6.41	.71	2.16	-.08
	Task Significance	5.83	.98	3.18	.10
Environmental Characteristics	Caring Environment	3.19	.98	5.52*	.17
	Cooperative Environment	5.79	.93	8.23**	.19
	Professional Staff Involved in Decision-Making	3.36	1.00	6.08*	.16
	Fair Environment	3.69	.88	.11	.02
Extrinsic Characteristics	Salary	5.44[c]	1.91	8.57**	.18

[a] Scale for Means of Job Characteristic and Environmental Characteristic variables (1 = Low, 7 = High)

[b] Univariate F at end of Analyses

[c] A score of 5 represents a salary level between $30,000 and $34,999.

* $P \leq .05$
** $P \leq .01$
*** $P \leq .001$

TABLE 4

Summary of Significant Steps
in Each Variable Set
To Predict Administrators' Job Satisfaction

Step	Variable That Enters	R^2	Gain	df	F
Personal Characteristics					
1	Age	.06	-	1/258	16.45***
2	Sex	.07	.01	2/257	10.33***
Job Characteristics					
1	Autonomy	.19	-	1/258	63.71***
2	Skill Variety	.27	.08	2/257	49.38***
3	Feedback from Job	.31	.04	3/256	39.66***
Environmental Characteristics					
1	Caring Environment	.11	-	1/258	34.31***
2	Cooperative Environment	.15	.04	2/257	24.06***
3	Professional Staff Involved in Decision-Making	.17	.02	3/256	18.70***
Extrinsic Reward					
1	Salary	.03	-	1/258	8.57**

* $P \leq .05$
** $P \leq .01$
*** $P \leq .001$

TABLE 5

Summary of Multiple Regression Using Four Sets of Significant Variables to Predict Administrators' Satisfaction

Step	Source of Variation	Partial F	df	R	R^2	F for Significance of R^2 Change	Beta[a]
1	Personal Characteristics	10.33***	2/257	.27	.07		
	Age						.13
	Sex						.10
2	Job Characteristics	28.30***	5/254	.60	.34	37.36***	
	Autonomy						.22
	Skill Variety						.25
	Feedback from Job						.18
3	Environmental Characteristics	22.32***	8/251	.64	.40	8.28***	
	Caring Environment						.21
	Cooperative Environment						.07
	Professional Staff Involved in Decision-Making						.03
4	Extrinsic Characteristic						
	Salary	19.77***	9/250	.64	.39	.06	

* $P \leq .05$
** $P \leq .01$
*** $P \leq .001$

[a] Beta at end of equation when first 3 variable sets are entered.

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